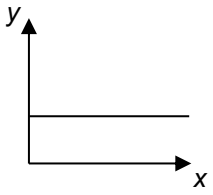
Name _____ Period _____ Date _____

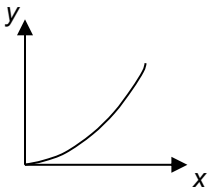
8-4 TEST

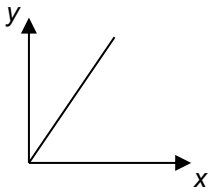
Show your work on a separate sheet of paper.

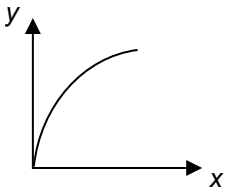
1. Which graph best matches the input-output table below?

Input (*x*)	0	1	2	3	4	5
Output (*y*)	0	1	4	9	16	25

A.


B.


C.


D.


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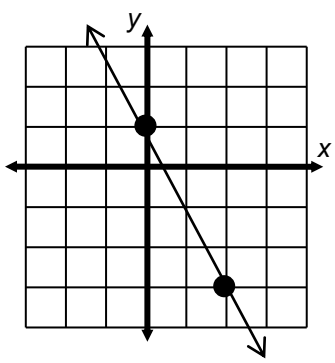
2. Choose all the representations that could match the linear function graphed below.



A. The table

Input (*x*)	1	-3	-1	4
Output (*y*)	0	2	1	-2

B. The ordered pairs

(0, 1) (1, -1)
(0.5, 0) (2, -3)

C. The equation
$y = -2x + 1$

D. The equation
$y = x - 2$

---

3. Which of the following could represent a function?

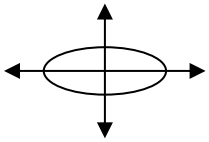
A. The equation
$y = -3 - 3x$

B. The ordered pairs
(4, 5) (4, 6) (5, 7) (8, 9)

C. The table

Input (*x*)	4	-2	3	0
Output (*y*)	6	6	6	6

D. The graph



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8-4 TEST
Continued

4. Mac and Cam both saved money for a new skateboard.

   - Mac saved the same amount each week. This table shows his savings at the end of every two weeks.

Time elapsed in weeks	2	4	6
Total saved in dollars	26	52	78

   - Cam's savings can be modeled with the equation $y = 52x$ where x is time elapsed in weeks and y is total saved in dollars.

   Which statements correctly compare the rates at which Mac and Cam save?

   A. Cam is saving twice as fast as Mac.

   B. Cam is saving four times as fast as Mac.

   C. Cam is saving $26 per week more than Mac.

   D. Cam is saving $39 per week more than Mac.

Use this information for problems 5 – 7:

Sienna is saving for an MP3 player that costs $200. She has $50 already saved in the bank and is going to save $25 each month.

5. If x represents the number of months and y represents the total amount saved, which equation shows the total amount of money Sienna will have at the end of each month?

   A. $y = 25x + 200$ B. $y = 25x + 50$ C. $y = 50x + 25$ D. $y = 25x - 200$

---

6. What quantity represents the initial value of the function?

   A. $200 B. $50 C. $25 D. x

---

7. What quantity represents the rate of change of the function?

   A. $200 B. $50 C. $25 D. x

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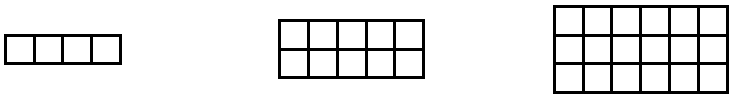
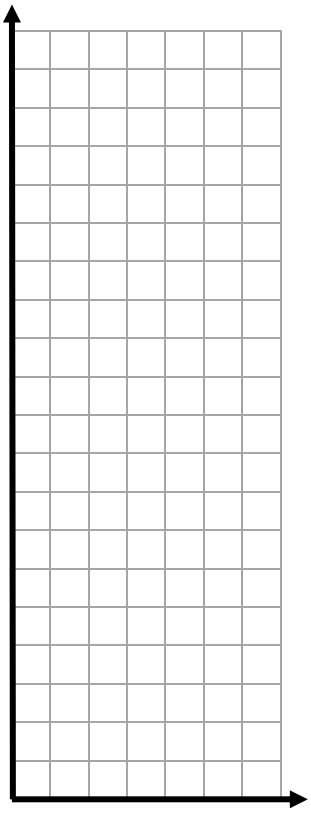
8-4 TEST
Continued

8. Here is the start of a growing shape pattern and its representation in a table. Each square is one unit on each side.

Step # 1 2 3



step # (*x*)	Area (*y*)
1	4
2	
3	
4	
5	



a. Draw step 4.

b. Complete the table.

c. Graph the ordered pairs. Make sure to label and scale the axes appropriately.

d. Describe the graph. Does the graph appear to be that of a linear function?